

National Science Foundation Authorization Act of 2007

H.R.1867 [110th]

National Science Foundation Authorization Act of 2007 - (Sec. 3)
Authorizes appropriations to the National Science Foundation (NSF) for FY2008-FY2010, with specific allocations for: (1) research and related activities; (2) education and human resources; (3) major research equipment and facilities construction; (4) agency operations and award management; (5) the Office of the National Science Board; and (6) the Office of Inspector General.

Sets minimum and maximum amounts of awards under the Major Research Instrumentation program.

Permits,
in addition to the acquisition of instrumentation and equipment, funds made available by awards under the Major Research Instrumentation program to be used to support the operations and maintenance of such instrumentation and equipment.

Requires an institution of higher education receiving an award under such program to provide at least 30% of the cost from private or non-federal sources. Exempts institutions of higher education that are not Ph.D-granting institutions from such cost sharing requirement and allows the Director of the NSF (the Director) to reduce or waive such requirement for: (1) certain institutions that are not ranked among the top 100 institutions receiving federal research and development funding; and (2) consortia of institutions of higher education that include at least one institution that is not a Ph.D-granting institution.

Requires
the continuation of programs in support of undergraduate education, including those authorized under the provisions of section 17 of the National Science Foundation Authorization Act of 2002 (relating to undergraduate science, mathematics, engineering, and technology education reform). Increases funding for these programs in proportion to the increase in the total amount appropriated to NSF in any year for which appropriations are authorized by this Act.

Revises the
selection process for awards that require the submission of preproposals and that also limit the number of preproposals. Requires

the National Science Board to: (1) assess the effects on institutions of higher education of NSF policies regarding the imposition of limitations on the number of proposals that may be submitted by a single institution for programs supported by NSF; (2) determine whether current policies are well justified and appropriate for the types of programs that limit the number of proposal submissions; and (3) summarize in a report its findings and any recommendations regarding changes to the current policy on the restriction of proposal submissions.

Requires the Director to increase funding for the Research Experiences for Undergraduates program in proportion to the increase in the total amount appropriated to the NSF for research and related activities in any year for which appropriations are authorized by this Act.

Requires the Director: (1) as part of Informal Science Education activities, to support activities to create informal educational materials, exhibits, and multimedia presentations relevant to global warming, climate science, and greenhouse gas reduction strategies; and (2) as part of Discovery Research K-12 activities, to support the development of K-12 educational materials relevant to global warming, climate science, and greenhouse gas reduction strategies.

(Sec. 4) Requires the continuation of the program of Centers for Research on Learning and Education Improvement as established in section 11 of the National Science Foundation Authorization Act of 2002 (relating to the establishment of such Centers).

Amends the National Science Foundation Authorization Act of 2002 to provide for the awarding of grants to eligible nonprofit organizations and their consortia to establish such Centers.

(Sec.
5) Directs the National Science Board to evaluate: (1) the role of NSF in supporting interdisciplinary research, including through the Major Research Instrumentation program, the effectiveness of NSF's efforts in providing information to the scientific community about opportunities for funding of interdisciplinary research proposals, and the process through which interdisciplinary proposals are selected for support; and (2) the effectiveness of NSF's efforts to engage undergraduate students in research experiences in interdisciplinary settings, including through the Research in Undergraduate Institutions program and the Research Experiences for Undergraduates program. Requires the Board to provide the results of its evaluation, including a recommendation for the proportion of the NSF's research and related activities funding that should be allocated for interdisciplinary research.

(Sec.

6) Requires the Director to carry out a pilot program to award one-year grants to individuals to assist them in improving research proposals that were previously submitted to NSF but not selected for funding. Requires that such grants be used to enable individuals to resubmit updated research proposals for review by NSF through NSF's competitive merit review process. Permits using funds made available under this section for the generation of new data and the performance of additional analysis.

Requires the Director to make awards under this section based on the advice of program officers of the NSF.

Allows the Director to carry out this section through the Small Grants for Exploratory Research program.

Directs the National Science Board to conduct a review and assessment of the pilot program.

(Sec.

7) Requires the Director, in evaluating research proposals under NSF's broader impacts criterion, to give special consideration to proposals that involve partnerships between academic researchers and industrial scientists and engineers that address research areas that have been identified as having high importance for economic competitiveness, such as nanotechnology. Instructs the Director to encourage research proposals from institutions of higher education that involve partnerships with businesses and organizations representing businesses in fields that have been identified as having high importance for economic competitiveness and that include input on the research agenda from and cost-sharing by the industry partners. Requires the Director to report on the impact of the broader impacts grant criterion used by NSF.

(Sec. 8) Instructs the Director to: (1) require that all grant applications that include funding to support postdoctoral researchers include a description of mentoring activities; and (2) ensure that this part of the application is evaluated under NSF's broader impacts merit review criterion. Instructs the Director to require that annual reports and the final report for research grants that include funding to support postdoctoral researchers include a description of the mentoring activities provided to such researchers.

(Sec.

9) Instructs the Director to require that each institution that applies for financial assistance from NSF for science and engineering research

or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to participating undergraduate students, graduate students, and postdoctoral researchers .

(Sec. 10) Instructs

the Director to ensure that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the NSF are made available to the public in a timely manner and through NSF's website.

(Sec. 11) Makes an

investigator supported under a NSF award, whom the Director determines has failed to comply with the provisions of section 734 (concerning the dissemination and sharing of research results) of the Foundation Grant Policy Manual, ineligible for a future award under any NSF supported program or activity. Allows the Director to restore the eligibility of such an investigator on the basis of the investigator's subsequent compliance with such provisions and with such other terms and conditions as the Director may impose.

(Sec. 12) Requires the

Director to annually evaluate all NSF's grants that are scheduled to expire within one year and that primarily: (1) meet the objectives of the Science and Engineering Equal Opportunity Act; or (2) provide teacher professional development. Allows the Director, for grants that are identified and that are deemed by the Director to be successful in meeting the objectives of the initial grant solicitation, to extend those grants for up to three additional years beyond their scheduled expiration without the requirement for a recompetition. Permits the extension of such grants for an additional three years as specified. Requires the Director to submit a report that: (1) lists the grants extended; and (2) provides recommendations regarding the extension of such authority to programs other than those specified in this section.

(Sec.

13) Requires the National Science Board to: (1) evaluate certain impacts of its policy to eliminate cost sharing for research grants and cooperative agreements for existing and new programs involving industry participation; and (2) report the results of such evaluation.

(Sec.

14) Amends the National Science Foundation Act of 1950 to permit NSF to receive and use funds donated to NSF for specific prize competitions.

(Sec. 15) Requires the National Science Board to evaluate the appropriateness of: (1) the requirement that funding for detailed

design work and other preconstruction activities for major research equipment and facilities come exclusively from the sponsoring research division rather than being available from the Major Research Equipment and Facilities Construction account; and (2) NSF's policies for allocation of costs for, and oversight of, maintenance and operation of major research equipment and facilities. Requires the Board to report on the results of such evaluations and on any recommendations for modifying the current policies related to allocation of funding for such equipment and facilities.

Requires that plans for proposed construction, repair, and upgrades to national research facilities include estimates of the total project cost and the source of funds for major upgrades of facilities in support of Antarctic research programs.

Requires the Director to transmit: (1) a specified report cataloging all elementary and secondary school, informal, and undergraduate educational programs and activities supported through appropriations for research and related activities; and (2) along with the FY2011 budget request, a report listing the funding success rates and distribution of awards for the Research in Undergraduate Institutions program.

Requires the Director, within 60 days of enactment of legislation providing for the annual appropriation of funds for NSF, to submit a plan for the allocation of education and human resources funds authorized by this Act for the corresponding fiscal year, including any funds from within the research and related activities account used to support activities that primarily improve education or broaden participation.

(Sec. 16) Amends the National Science Foundation Authorization Act of 2002 to require: (1) the Inspector General of NSF to conduct triennial audits (currently, annual audits) of the compliance by the National Science Board with the requirements specified under the Act for open meetings; (2) the Board to maintain the General Counsel's certificate, the presiding officer's statement, and a transcript or recording of any closed meeting for at least three years after such meeting; and (3) appointment of technical and professional personnel on leave of absence from academic, industrial, or research institutions for a limited term and such operations and support staff members (currently, such clerical staff members) as may be necessary.

Amends the National Science Foundation Authorization Act of 1975 to increase the number of Alan T. Waterman Awards that may be made in any one fiscal year to three.

(Sec.

17) Requires rendering of National Science Board reports to the President and Congress (currently, rendered to the President for submission to Congress).

(Sec. 18) Directs NSF to arrange with

the National Academy of Sciences for a report to Congress about barriers to increasing the number of underrepresented minorities in science, technology, engineering, and mathematics fields and to identify strategies for bringing more underrepresented minorities into the science, technology, engineering, and mathematics workforce.

(Sec.

19) Expresses the sense of Congress that: (1) the mathematics and science education partnership program at NSF and the mathematics and science partnership program at the Department of Education are intended to be complementary, not duplicative; (2) Congress intends that the NSF peer-reviewed partnership programs found to be effective should be put into wider practice by dissemination through the Department of Education partnership programs; and (3) the Director and the Secretary of Education should collaborate to ensure that the two components of this effort continue to work in concert for the benefit of states and local practitioners nationwide.

(Sec. 20) Authorizes the Director

to establish a new program to award grants on a competitive, merit-reviewed basis to Hispanic-serving institutions to enhance the quality of undergraduate science, mathematics, engineering, and technology education at such institutions and to increase the retention and graduation rates of students pursuing associate's or baccalaureate degrees in science, mathematics, engineering, or technology.

Specifies

that the grants awarded shall support: (1) activities to improve courses and curricula in science, mathematics, engineering, and technology; (2) faculty development; (3) stipends for undergraduate students participating in research; and (4) other activities consistent with the grant program authorized by this section, as determined by the Director.

States that funding for instrumentation is an allowed use of grants awarded under this section.

(Sec.

21) Requires the Director to provide grant supplements to institutions receiving awards under the Integrative Graduate Education and Research Traineeship program.

Requires the grant supplements to be used to train graduate students in the communication of the substance and importance of their research to nonscientist audiences, including policymakers.

Requires the Director to transmit a report describing how such activities have been implemented. Requires that such report include data on the number of graduate students trained and the number and size of grant supplements awarded, as well as a description of the types of activities funded.

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